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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,923	02/05/2004	Toshihiro Mori	1232-5276	7379
27123	7590	01/03/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			SOLOMON, LISA	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/773,923

Applicant(s)

MORI, TOSHIHIRO

Examiner

Lisa M. Solomon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,9 and 10 is/are rejected.
- 7) ☒ Claim(s) 6 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: On figures 1,3, and 6 reference character 1 mentioned on pages 1,8,12-13 lines 17,11, 13, and 19, 25 respectively. In addition on figures 4A-4C reference characters 12,12a, and 12b mentioned on pgs. 18 and 25 lines 18, 25; 24. Furthermore, reference character 10 mentioned on pg. 20 line 25. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference characters 1a and 1b on figures 1,3, and 6. In the specifications they are denoted as reference character 1 on pages 2-4 lines 14-15; 14, 19-20, and 26; 18, pages 8-10 lines 18, 21, and 26; 2-3, 21-22; 1, 20, and 25, and pg.12 line 1. In addition, reference characters 2,22,23,24, and 25 on figures 4B –4C. Corrected

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drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "9" has been used to designate both the supporting plate and the second sealing resin. In addition reference character 7 on pg. 18 lines 14,16 in the specification is denoted as electrodes and not electrode pads as in line 5 on same page. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of

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any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: on pg. 15 line 22 resin is misspelled.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (6,659,591) in view of Suzuki (6,084,612).

With respect to claim 1, Sato ('591) teaches a recording element substrate including a discharge port for discharging liquid (see fig. 4, H1110 and H1107 respectively) and discharge energy generation elements to generate discharge energy in column 8 lines 19-22. (Also see fig.4, H1103) Sato ('591) teaches a flexible film wiring substrate (see fig. 11, H1300) that includes an opening to expose the recording element substrate (see fig. 2) including lead electrodes and that the flexible film wiring substrate and the recording element substrate are electrically connected as to supply electrical signals for causing discharge by the discharge energy generation elements in

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column 9 line 46 – column 10 line 42. (See fig. 3) Sato ('591) teaches electrode pads on the recording element substrate connected to the lead electrodes that are located on the flexible film wiring substrate. (See figs. 29A and 29B, H1104) Sato ('591) lacks the teaching of a dummy lead. Suzuki et al. (6,084,612) does teach a dummy lead in column 4 lines 55-57.

With respect to claim 2, Suzuki ('612) teaches the dummy lead on the flexible film wiring substrate in column 1 lines 39-40 and column 4 lines 55-57.

With respect to claim 3, Sato teaches the electrical connections between the lead electrodes and electrode pads are sealed with resin.

With respect to claim 4, Suzuki ('612) teaches the dummy leads are arranged on the end portions of the lead electrodes.

With respect to claim 5, Suzuki ('612) teaches the interval between the lead electrodes and the dummy leads as being equal in column 7 lines 7-11 and column 9 lines 1-4.

It would have been obvious to one of ordinary skill in the art to modify the flexible film wiring substrate of Sato to include the dummy lead of Suzuki for the purposes of preventing damage to the electrical connections caused by the sealing resin.

7. Claims 7, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato ('591) in view of Suzuki ('612) as applied to claims 1-5 above, and further in view of Ogawa (6,680,759).

Sato and Suzuki are relied upon for the reasons and disclosure set forth above.

Sato and Suzuki lack the teaching of the dummy lead arranged between the adjacent lead electrodes, the width of the dummy lead to be larger the width of the lead electrodes, and the dummy lead and the lead electrodes manufactured in the same step as set forth in claims 7, 9-10.

Ogawa ('759) teaches the dummy leads arranged between two lead electrode groups (column 5 lines 39-40 and 56-57), the width of the dummy leads to be wider than the lead electrodes (column 5 lines 55-56), and the dummy leads to be manufactured in the same step as the lead electrodes (column 5 lines 44-48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wiring substrate of Sato by incorporating the characteristics set forth above in view of Ogawa to prevent gaps that are larger than desired.

8. Claims 6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Prior art does not disclose or suggest the claimed "the dummy lead is provided near end portions of the plurality of recording element substrates" in combination with the remaining elements as set forth in claim 6.

10. Prior art does not disclose or suggest the claimed "gap between each of the lead electrodes and the dummy lead is set to fall within a range of $0.75P \leq P \leq 1.25 P$ " as set forth in claim 8.

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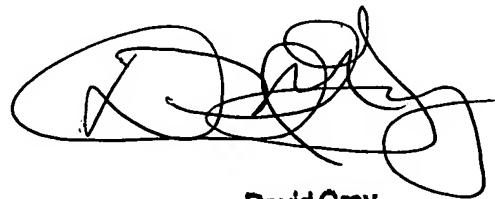
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa M. Solomon whose telephone number is (571) 272-1701. The examiner can normally be reached on 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMS
12/29/2005

A handwritten signature in black ink, appearing to read 'David Gray', with a large, stylized flourish extending from the end of the signature.

David Gray
Primary Examiner